

BIBLIOGRAPHY

C. FITZHUGH TALMAN, *in charge of Library*

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Agricultural Index

Subject index to a selected list of agricultural periodicals and bulletins. v. 6. 1931-1933. 1730 p. 1934.

Appleton, E. V.

On two methods of ionospheric investigation. Cambridge. 1933. p. 673-687. diagr. 26 c. (Reprint: Physical society. Proceedings. London. v. 45, part 5, no. 250, 1 September, 1933.)

Arctic institute of the U.S.S.R.

Bulletin. Leningrad. 1931-1932. 24½ cm. n. d. [Title also in Russian.]

Aurén, T. E.

Illumination from sun and sky. Stockholm. 1933. 55 p. figs., pls. 22 cm. (Arkiv för matematik, astronomi och fysik. Utgivet av K. svenska vetenskapsakademien. Band 24 A, N:o 4.)

[Gerlands] Beiträge zur Geophysik

Sach- und Namen-Register zu Band 1-35, einschliesslich Ergänzungsbänden I-III und einem Ergänzungsheft. Leipzig. Akademische Verlagsgesellschaft M. B. H. 1933.

Bernheimer, Walter E.

Apparate und Methoden zur Messung der Gesamtstrahlung der Himmelskörper. Berlin. 1933. p. 407-501. illus., tabs., diagrs. 24½ cm. (Sonderabdruck aus dem Handbuch der Astrophysik, von G. Eberhard, usw. Band 1.)

Brevoort, M. J., & Joyner, U. T.

Aerodynamic characteristics of anemometer cups. Washington, D. C. 1934. 7 p. 12 pl., tab. 26½ cm. (National advisory committee for aeronautics. Technical notes. no. 489. Feb., 1934.)

Daniel Guggenheim airship institute, Akron, Ohio
Publication no. 1 . . . Akron, 1933 . . . illus., (incl. plans). diagrs. 28 cm. (At head of title: The Daniel Guggenheim airship institute. Director of research, Theodor von Kármán.)

Japan. Hydrographic department.

Bulletin of the Hydrographic department, Imperial Japanese navy. v. 6 . . . Tókyó. 1933 . . . 26 cm. tabs., diagrs.

Japan. Hydrographic department

Charts for the Bulletin. v. 6 . . . 1933 . . . charts, plates. 26 cm.

Lange, O. K.

Measurements of vertical air currents in the atmosphere. (Technical memorandums. National advisory committee for aeronautics. no. 648. November, 1931.) Washington. 1931. 9 p. pls., diagrs. 26½ cm. (Zeitschrift für Flugtechnic und Motorluftschiffahrt. Vol. 22, no. 17, September 14, 1931. Verlag von R. Oldenbourg, München und Berlin.)

Manila, [Philippine Islands.] Observatory

Publications. v. 1 . . . nos. 1-10. Manila. 1927-1931 . . . v. p. illus., pls., tabs. 29 cm. (v. 3 "Oceanographic papers.")

Martinique. Ministère des colonies

Bulletin annuel du service météorologique et de l'Observatoire géophysique. année 1932 . . . Paris. [1933] . . .

Norway. Meteorologiske institutt

Radiover. 1932-1933 . . . Radioutsendelser av værmeldinger i Norge . . . Utgitt av det Norske meteorologiske institutt. Oslo, 1932-1933. . . illus., maps. 21 cm.

Somme. Commission météorologique

Bulletin de la Commission météorologique du département de la Somme [France]. Année 1925-1932 . . . Amiens. 1924-1932. . .

Talence (Gironde). Observatoire

Bulletin. 2d série. nos. 1 . . . 1928- . . . 25 cm. Talence. 1928 . . . (Discontinued for 1914-1927. Resumed 1928.)

SOLAR OBSERVATIONS

SOLAR RADIATION MEASUREMENTS DURING MAY 1934

By IRVING F. HAND, *Assistant in Solar Radiation Investigations*

For a description of instruments employed and their exposures, the reader is referred to the January 1932 REVIEW, page 26.

Table 1 shows that solar radiation intensities averaged below normal for May at all three Weather Bureau stations.

Table 2, on the other hand, shows the greatest excess ever recorded for a whole month; every station being above normal with the exception of Miami, Fla. The large amount of radiation received during May, together with the low amount of precipitation in the Middle West, are two of the largest factors in producing the drought and unusually heavy dust storms of the month.

Table 3 shows large turbidity factors which explain in large part the minus departures of direct solar radiation. It was impossible to measure the amount of dust in the air by the red and yellow component method as our tables are not comprehensive enough.

Polarization measurements obtained on 7 days at Washington give a mean of 46 percent, with a maximum of 58 percent on the 7th. At Madison measurements made on 12 days give a mean of 52 percent with a maximum of 61 percent on the 22d. All these values are below the May normals. The reading of 11 percent

obtained on the 11th at Washington is the lowest ever recorded by this Bureau at any station and is owing to one of the greatest dust storms ever noted in that city.

TABLE 1.—*Solar radiation intensities during May, 1934*

[Gram-calories per minute per square centimeter of normal surface]

Washington, D.C.

Date	Sun's zenith distance										Local mean solar time	
	Air mass											
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°		
75th mer. time												
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.	
	mm	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm		
May 5	10.21				0.74	1.14					5.56	
May 7	12.68					1.04	1.32				11.38	
May 8	4.75		0.75	0.94	1.07	1.38	1.13	0.84			5.16	
May 11	12.24						.39				5.16	
May 12	4.95					.96					4.57	
May 18	8.81	0.40	.62	.74	.90	1.14					8.81	
May 21	12.24	.62	.70	.84	.99	1.22					12.24	
May 22	16.20					1.08					16.20	
May 23	7.57							1.40			5.36	
May 24	8.18				.68	1.08	1.26				5.79	
May 28	6.02					.82	1.04	1.26			5.79	
Means		(.51)	.69	.80	.99	1.17	(1.13)	(.84)				
Departures		-1.12	-0.02	-0.02	+.00	-0.09	.22	.05				